Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-71 (Cancelled)

72. (Previously presented) A metal matrix composite material, wherein the composite is formed from woven or chopped graphite and wherein the material is formed using a method comprising the steps of:

impregnating the graphite with a polymer containing a metal powder;

drying the graphite;

passing the graphite through a molten bath of metal alloy that is at a temperature to carburise the polymer and so form the composite material; and

exerting pressure on the composite material to remove excess metal alloy therefrom.

73. (Previously presented) The material of Claim 72 wherein the composite is formed from woven or chopped graphite and a ceramic material.

74. (Previously presented) The material of Claim 72 wherein the woven graphite is of the type 3K TOW, 380g/m^2, M60/T300.

75. (Previously presented) The material of Claim 72 wherein the polymer comprises either a polymer solution or molten polymer.

76. (Previously presented) The material of Claim 72 wherein the metal powder is formed from a metal alloy.

77. (Previously presented) The material of Claim 76 wherein the metal alloy constitutes at least 20% w/w of the polymer.

78. (Previously presented) The material of Claim 77 wherein the metal powder is formed from an alloy including aluminum, nickel and molybdenum.

79. (Previously presented) The material of Claim 72 wherein the step of drying the graphite comprises passing the graphite through an electric furnace.

80. (Previously presented) The material of Claim 72 wherein the molten metal alloy is formed from an alloy of aluminum, nickel and molybdenum.

81. (Previously presented) The material of Claim 72 wherein the step of exerting pressure on the composite material comprises passing the composite through a set of rollers that are capable of exerting about 35 to 40 tons of compression and which squeeze out substantially all excess metal alloy from the composite material.

82. (Previously presented) The material of Claim 72 wherein a metal is applied to the composite material to provide excellent bonding of the material.

83. (Currently amended) The ~~method~~ material of claim 82 wherein the metal is titanium, beryllium or a metal alloy.

84. (Currently) The ~~method~~ material of claim 83 wherein the metal is applied by plasma spraying or hot sheet pressing.

85. (Previously presented) A rolled metal matrix composite material, wherein the composite is formed from woven or chopped graphite and wherein the material is formed using a method comprising the steps of:

impregnating the graphite with a molten polymer containing a high temperature alloy powder;

drying the impregnated graphite; and

rolling the impregnated graphite in a set of rollers to form the rolled composite material.

86. (Previously presented) The material of claim 85 wherein the composite is formed from woven or chopped graphite and a ceramic material.

87. (Previously presented) The material of Claim 85 wherein the woven graphite is of the type 3K TOW, 380g/m^2, M60/T300.

88. (Previously presented) The material of Claim 85 wherein the high temperature alloy is a titanium or nickel alloy.

89. (Previously presented) The material of Claim 88 wherein the metal alloy constitutes up to about 50% w/w of the polymer.

90. (Previously presented) The material of Claim 85 wherein the step of drying the graphite comprises passing the graphite through an electric furnace.

91. (Previously presented) The material of Claim 85 wherein the step of exerting pressure on the impregnated graphite comprises passing the graphite, through a set of rollers that are capable of exerting about 35 to 40 tons of compression.

92. (Previously presented) The material of Claim 85 wherein a metal is applied to the composite material to provide excellent bonding of the material.

93. (Previously presented) The material of Claim 92 wherein the metal is titanium, beryllium or a metal alloy.

94. (Previously presented) The material of Claim 93 wherein the metal is applied by plasma spraying or hot sheet pressing.